U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION II
Emergency and Remedial Response Division
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MEMORANDUM

TO: Tanya Mitchell, RPM
ERRD/SPB

FROM: Dr. Lora M. Smith, Risk Assessor
ERRD/PSB/Technical Support Section

DATE: May 22, 2013

RE: Addendum to the Human Health Risk Assessment
Raritan Bay Slag, Old Bridge/Sayreville, New Jersey

The baseline human health risk assessment performed for the site did not evaluate a direct contact residential exposure scenario to soils or sediments at the site. This addendum to the baseline risk assessment was performed to evaluate a typical EPA residential exposure scenario (i.e., exposure duration = 30 years, exposure frequency = 350 days per year). The exposure point concentration (EPC), which is a statistical estimate of the true arithmetic mean concentration of a chemical in a medium (e.g., soil) at an exposure point (e.g., direct contact with park soils), for each contaminant in each area was screened against the residential regional screening level (RSL), a risk-based screening level, for soil. The RSL combines current human health toxicity values with standard exposure factors to estimate contaminant concentrations in environmental media (e.g., soil, air, and water) that are considered by the Agency to be health protective of human exposures (including sensitive groups), over a lifetime. In this addendum, a risk level of 10^{-4} was used for carcinogens and a hazard quotient (HQ) of 1 for noncarcinogens.

This evaluation concluded that areas not targeted for remediation had no contamination above acceptable residential risk levels. In a limited number of samples, a few contaminants (e.g., antimony in Area 1, arsenic and antimony in Areas 8 & 11, and antimony in the upland portion of Area 9) exceeded their respective screening levels. These areas have been targeted for remediation in the ROD and as a result, contamination above acceptable residential risk levels will no longer exist once the remedy is in place.

Once post-excavation samples confirm that contaminant levels have been reduced below acceptable residential screening levels, the site may be available for unlimited use/unrestricted exposure.

/LMS